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FIG. 1

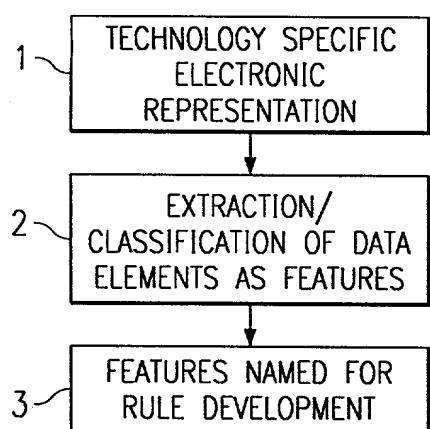


FIG. 3

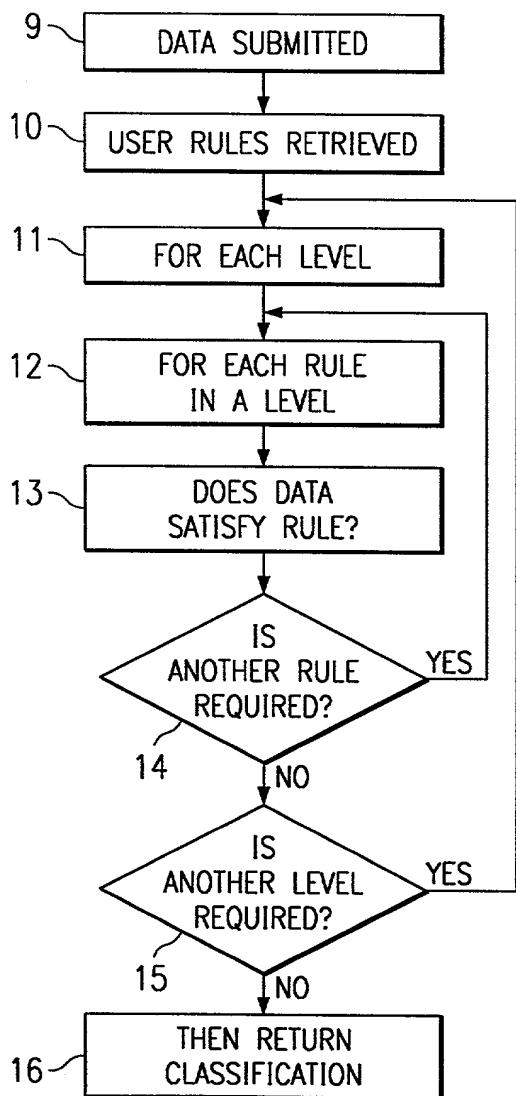


FIG. 2

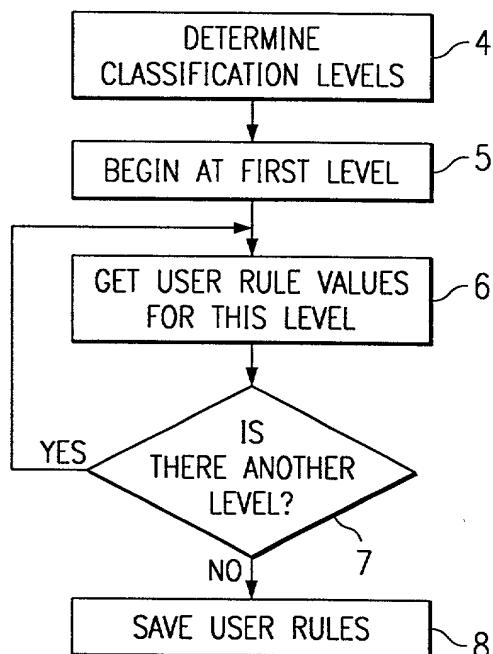
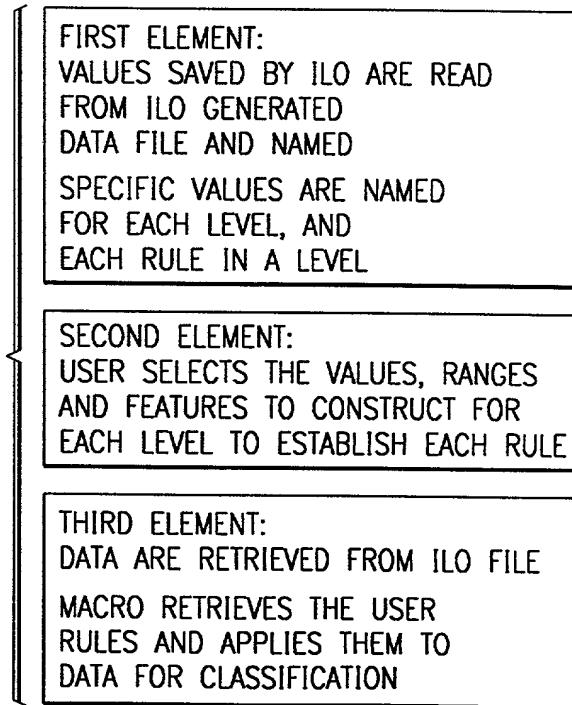


FIG. 4



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FIG. 5

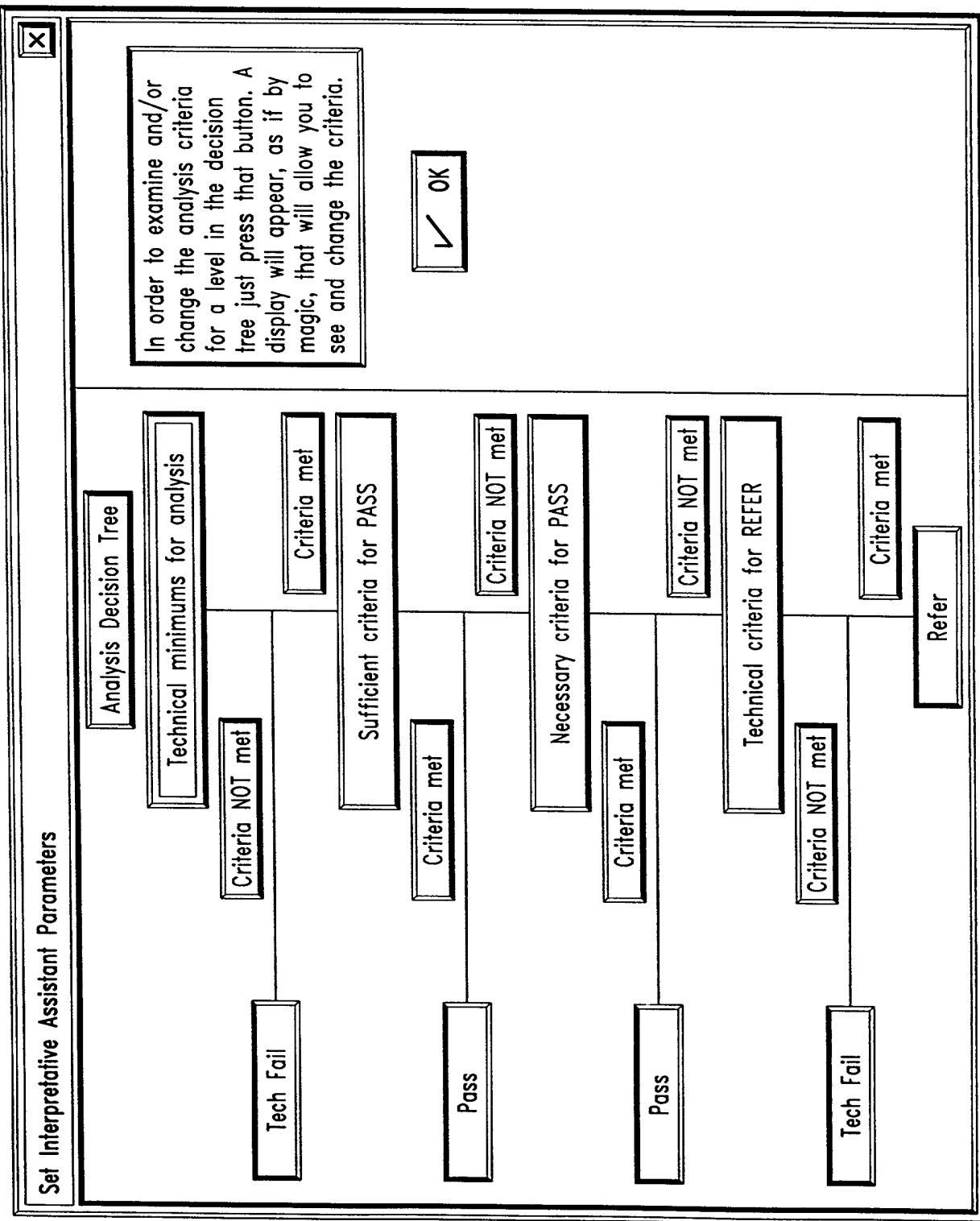


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Technical minimums for analysis

Criterion	Value																								
<input checked="" type="checkbox"/> Minimum number of quiet sweeps	<table border="1"><tr><td>-</td><td>60</td><td>+</td></tr><tr><td>-</td><td>9999</td><td>+</td></tr><tr><td>-</td><td>0</td><td>+</td></tr><tr><td>-</td><td>100</td><td>+</td></tr><tr><td>-</td><td>0</td><td>+</td></tr><tr><td>-</td><td>85</td><td>+</td></tr><tr><td>-</td><td>0</td><td>+</td></tr><tr><td>-</td><td>100</td><td>+</td></tr></table>	-	60	+	-	9999	+	-	0	+	-	100	+	-	0	+	-	85	+	-	0	+	-	100	+
-	60	+																							
-	9999	+																							
-	0	+																							
-	100	+																							
-	0	+																							
-	85	+																							
-	0	+																							
-	100	+																							

Maximum number of quiet sweeps	
Minimum percent quiet sweeps	
Maximum percent quiet sweeps	
Minimum trough stimulus dB	
Maximum peak stimulus dB	
Minimum trough percent stimulus stability	
Maximum peak stimulus stability	

Minimum number of above criterion required to classify as tech fail 

-	1	+
---	---	---

OK  Cancel

FIG. 7

Set SUFFICIENT criteria for pass

Sufficient Criteria for QUICK-SCREEN Mode

<input type="checkbox"/> Whole response dB >=	<table border="1"><tr><td>-</td><td>100</td><td>+</td></tr><tr><td>-</td><td>100</td><td>+</td></tr><tr><td>-</td><td>100</td><td>+</td></tr><tr><td>-</td><td>100</td><td>+</td></tr><tr><td>-</td><td>100</td><td>+</td></tr><tr><td>-</td><td>100</td><td>+</td></tr><tr><td>-</td><td>100</td><td>+</td></tr></table>	-	100	+	-	100	+	-	100	+	-	100	+	-	100	+	-	100	+	-	100	+
-	100	+																				
-	100	+																				
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-	100	+																				
-	100	+																				
-	100	+																				
-	100	+																				

Whole wave correlation >=	
Net response 800 Hz >=	
Net response 1600 Hz >=	
Net response 2400 Hz >=	
Net response 3200 Hz >=	
Net response 4000 Hz >=	

OK  Cancel

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Set NECESSARY criteria for pass

QUICK-SCREEN Mode  Absolutely required

Whole response dB  $\geq$  100  +  
 Whole wave correlation  $\geq$  50  +  
 Net response 800 Hz  $\geq$  100  +  
 Net response 1600 Hz  $\geq$  100  +  
 Net response 2400 Hz  $\geq$  100  +  
 Net response 3200 Hz  $\geq$  100  +  
 Net response 4000 Hz  $\geq$  6  +

OK  Cancel

FIG. 8

Set NECESSARY criteria for pass

QUICK-SCREEN Mode  Contributing criteria

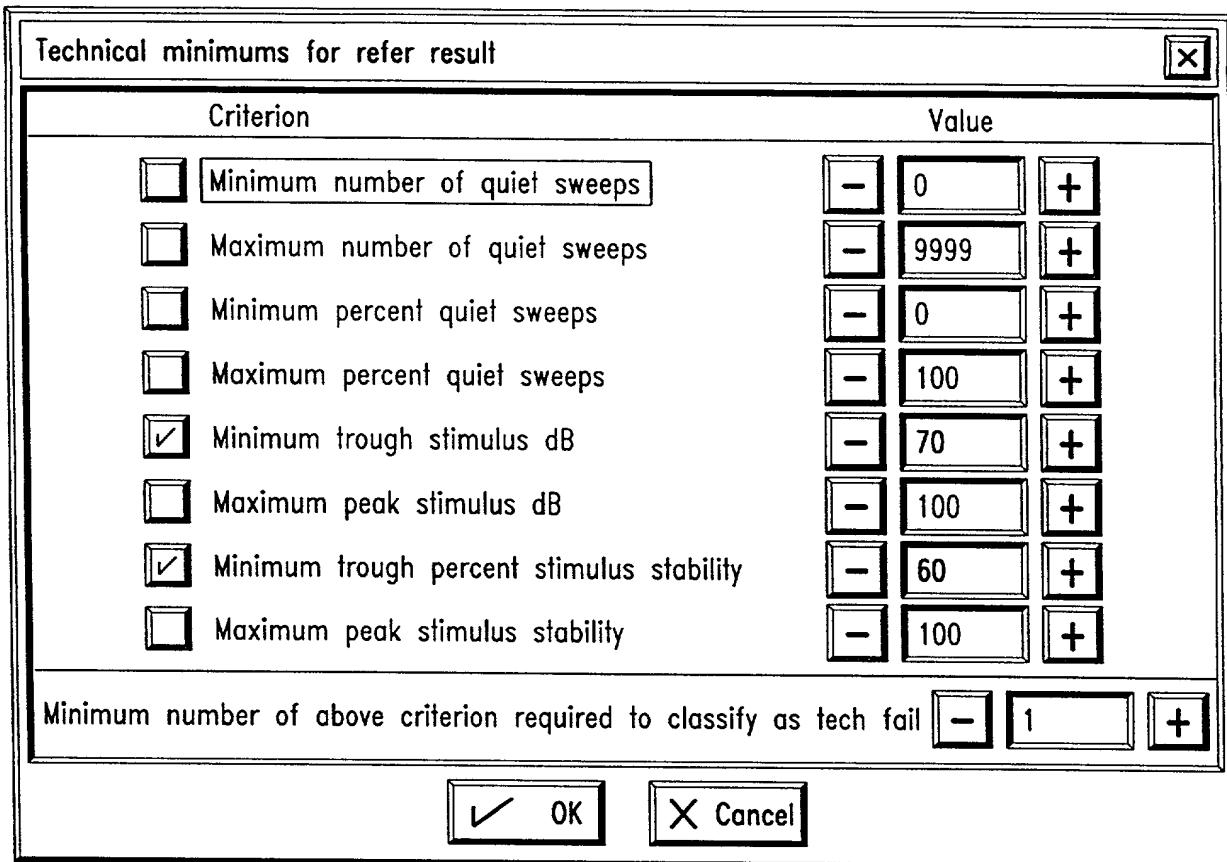
Whole response dB  $\geq$  100  +  
 Whole wave correlation  $\geq$  100  +  
 Net response 800 Hz  $\geq$  100  +  
 Net response 1600 Hz  $\geq$  3  +  
 Net response 2400 Hz  $\geq$  3  +  
 Net response 3200 Hz  $\geq$  6  +  
 Net response 4000 Hz  $\geq$  100  +  
Number of criteria required 2  +

OK  Cancel

FIG. 9

FIG. 10

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```
if((earresult.pass==EAR_PASSED)&&(eardata.wholecorrel<  
ILO_MINIMUM_WHOLEWAVE_CORRELATION)){earresult.pass =  
EARREFERRED;strncpy(earresult.failreason,  
ILO_INSUFF_WHOLEWAVE_CORREL_STRING,  
PAT_RESULT_REASON_FIELD_LENGTH);}  
if((earresult.pass==EAR_PASSED)&&(earcalcs.maxstimdb>  
ILO_MAXIMUM_STIM_DB)){earresult.pass=TECH_FAIL;strncpy(earresult.failreason,  
ILO_MAX_STIM_TOO_HIGH_STRING, PAT_RESULT_REASON_FIELD_LENGTH);}  
if(earresult.pass==EARREFERRED)  
{  
    if(earcalcs.minstimdb<ILO_MINIMUM_STIM_DB){earresult.pass =  
TECH_FAIL;strncpy(earresult.failreason, ILO_MIN_STIM_TOO_LOW_STRING,  
PAT_RESULT_REASON_FIELD_LENGTH);}  
    if(earcalcs.minstimstab<ILO_MINIMUM_STIM_STABILITY){earresult.pass =  
TECH_FAIL;strncpy(earresult.failreason, ILO_STIM_STAB_TOO_LOW_STRING,  
PAT_RESULT_REASON_FIELD_LENGTH);}  
}  
if(eardata.nquiet<ILO_MINIMUM_NUM QUIET){earresult.pass =  
TECH_FAIL;strncpy(earresult.failreason, ILO_INSUFF_NUM QUIET_STRING,  
PAT_RESULT_REASON_FIELD_LENGTH);}  
return earresult.pass;
```

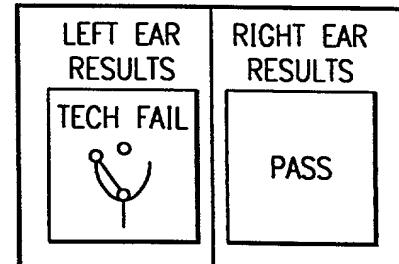
FIG. 11B

FIG. 11A

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```
@@@@@@@@@@@@@@@@@@@  
int Eartoae::Newanalysis()  
{  
    earresult.pass=EARREFERRED;  
    int bandcount=0;  
    if(eardata.clock_us==ILO_CLOCK_FOR_STANDARD_COLLECTION)//Regular  
ILO with bands of 1,2,3,4,5 k  
    {  
        // if(earcalcs.fft1knet[0]>2.5){bandcount++;} //This band not used since LF  
filter is generally used  
        if(earcalcs.fft1knet[1]>ILO_REGULAR_BAND_1_CUTOFF){bandcount++;}  
        if(earcalcs.fft1knet[2]>ILO_REGULAR_BAND_2_CUTOFF){bandcount++;}  
        if(earcalcs.fft1knet[4]>ILO_REGULAR_BAND_4_CUTOFF){bandcount++;}  
        if(earcalcs.fft1knet[3]<ILO_REGULAR_BAND_3_CUTOFF){bandcount = 0;}  
        if(bandcount>=ILO_MINIMUM_BANDCOUNT){earresult.pass =  
EAR_PASSED;strncpy(earresult.failreason, NULL_STR,  
PAT_RESULT_REASON_FIELD_LENGTH);}  
        else{strncpy(earresult.failreason, ILO_FAIL_NET_POWER_STRING,  
PAT_RESULT_REASON_FIELD_LENGTH);}  
    }  
    else if (eardata.clock_us==ILO_CLOCK_FOR_QUICK_SCREEN) // which means  
QuickScreen w/ bands of 0.8, 1.2, 2.4, 3.2, 4.0 k  
    {  
        // if(earcalcs.fft1knet[0]>2.5){bandcount++;} //This band not used since LF  
filter is generally used  
        if(earcalcs.fft1knet[1]>ILO_QUICK_BAND_1_CUTOFF){bandcount++;}  
        if(earcalcs.fft1knet[2]>ILO_QUICK_BAND_2_CUTOFF){bandcount++;}  
        if(earcalcs.fft1knet[3]>ILO_QUICK_BAND_3_CUTOFF){bandcount++;}  
        if(earcalcs.fft1knet[4]<ILO_QUICK_BAND_4_CUTOFF){bandcount = 0;}  
        if(bandcount>=ILO_MINIMUM_BANDCOUNT){earresult.pass =  
EAR_PASSED;strncpy(earresult.failreason,NULL_STR,  
PAT_RESULT_REASON_FIELD_LENGTH);}  
        else{strncpy(earresult.failreason, ILO_FAIL_NET_POWER_STRING,  
PAT_RESULT_REASON_FIELD_LENGTH);}  
    }  
    else //I don't know what is going on  
    {  
        earresult.pass=TECH_FAIL;  
        strncpy(earresult.failreason,  
ILO_UNKNOWN_COLLECTION_PARAM_STRING,  
PAT_RESULT_REASON_FIELD_LENGTH);  
    }  
}
```

FIG. 12



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## FIG. 13

Robert Smith, M.D.  
(ADDRESS)

Date of Report: March 17, 1997

Patient:

Date of Birth: March 14, 1997

Case Number:

Mother:

Best Result to Date Right Ear: REFER

Best Result to Date Left Ear: REFER

Dear Dr. Smith,

This child's hearing has been screened using transient evoked otoacoustic emissions or screening auditory brainstem responses. The purpose of the Hearing Screening Program is to facilitate early detection of hearing loss that will be detrimental to the normal development of speech and language.

The infant has not passed the hearing screening in either ear.

This is a hearing screen and these results do not mean that the infant has a hearing loss; however, we advise further evaluation before three months of age by an audiologist experienced with auditory brainstem responses and otoacoustic emissions. Normal hearing in at least one ear is critical for speech and language acquisition. Thus, follow-up is essential to determine if this finding is transient or if there is a persistent peripheral hearing loss. Effective early intervention can facilitate language development. This letter superceeds any prior reports. If you have additional questions, please do not hesitate to contact us.

Respectfully,

Richard Jones, Ph.D. CCC/A

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*FIG. 14*

Robert Smith, M.D.  
(ADDRESS)

Date of Report: March 19, 1997

Patient:

Date of Birth: March 18, 1997

Case Number:

Mother:

Best Result to Date Right Ear: PASS

Best Result to Date Left Ear: PASS

Dear Dr. Smith,

This child's hearing has been screened using transient evoked otoacoustic emissions and/or screening auditory brainstem responses. The purpose of the Hearing Screening Program is to facilitate early detection of hearing loss that will be detrimental to the normal development of speech and language.

Screening to date indicates essentially normal peripheral auditory function in both ears. No reevaluation is necessary.

Hearing loss can develop postnatally and these results should not preclude future evaluation if age-appropriate language skills do not develop or if other developmental features, intervening medical events, or parental concern should dictate. Conditions such as congenital infection, or a family history of hearing loss place a child at risk for progressive loss and follow-up evaluations are advised by the Joint Committee on Infant Hearing. This letter superceeds any prior reports. If you have questions concerning the evaluation, please do not hesitate to contact us.

Respectfully,

Richard Jones, Ph.D. CCC/A

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## FIG. 15

Robert Smith, M.D.  
(ADDRESS)

Date of Report: February 28, 1997

Patient:

Date of Birth: February 12, 1997

Case Number:

Mother:

Best Result to Date Right Ear: PASS

Best Result to Date Left Ear: REFER

Dear Dr. Smith,

This child's hearing has been screened using transient evoked otoacoustic emissions and/or screening auditory brainstem responses. The purpose of the Hearing Screening Program is to facilitate early detection of hearing loss that will be detrimental to the normal development of speech and language.

Screening to date shows essentially normal peripheral auditory function for the right ear. We were unable to obtain an acceptable response for the left ear.

This is a screening test and a unilateral refer does not mean that the infant will have a hearing loss in the left ear. Circumstances including transient middle ear fluid and the test technique itself can produce this result. For immediate confirmation of hearing in the left ear, the infant can be rescreened using auditory brainstem responses or otoacoustic emissions before three months of age. Normal hearing in one ear should allow early speech and language acquisition; however, if developmental features, intervening medical events such as chronic or recurrent otitis media, or parental concern for hearing are present, further evaluation by an audiologist experienced with auditory brainstem responses and otoacoustic emissions is indicated. This letter superceeds any prior reports. If you have additional questions, please do not hesitate to contact us.

Respectfully,

Richard Jones, Ph.D. CCC/A